

Farmers' health for sustainable farming

Research into farming characteristics and farmer health could contribute to the design of strategies to improve farmer health and well-being.

Sustainable farming includes possibly interrelated economic, environmental and social dimensions. Within the social dimension, farmers' health and well-being is a major component. This article presents the findings of a study of Irish farmers related to farming characteristics and self-reported health outcomes. It provides pointers to areas where improvements in farmers' health can be encouraged. It is recognised that there is a high incidence of occupational injury and disease among farmers. Irish farmers, however, also represent a high-risk group for lifestyle diseases. Research has found that Irish farmers had significantly higher mortality rates from cardiovascular disease (CVD), cancers and any cause of death compared to other occupational groups. The factors underpinning the health inequalities of Irish farmers are not fully understood. This study sought to address this gap by examining the relationship between male farmers' self-reported health outcomes and health behaviours on the one hand, and their age and farming characteristics on the other.

Measuring farming and health

Ethical approval for this research was granted by the Ethics Committee of Waterford Institute of Technology. This cross-sectional study used self-reported quantitative data gained from male farmers (n=316) over 18 years of age from the south-east of Ireland, who attended either a Teagasc training course or Irish Farmers' Association (IFA) and Irish Rural Link meetings. From the target group, 314 farmers (99%) filled in the questionnaire, which was modelled on the SLÁN 2007 survey. Data analysis included chi-square analysis to explore associations between farming characteristics and self-reported health outcomes. The significant outcomes were then subjected to binary regression to analyse what farming characteristics predict the likelihood (odds ratio >1 increased/<1 decreased likelihood) of reported health outcomes (Table 1).

Doctor visits and health indicators

Farmer participants were from a range of ages: <45 years (59%), 45-64 (35%), and ≥65 (6%); from full time (68%) and part-time (32%) farming; and, from different farm enterprises – cattle/suckler (31%),

dairy and drystock (27%) and other (42%). Over half of farmers (57%) reported having visited a doctor in the past 12 months, which is somewhat lower than the national average for Irish males (65%). One in five farmers (20%) reported never having consulted a doctor. Over one-third of farmers (39%) reported having experienced ill health in the past 12 months, mainly lower back pain, arthritis (rheumatoid and/or osteoarthritis) and/or anxiety. One in five farmers (20%) reported being a current smoker, compared to the national average of 24% for Irish males. The majority of farmers (88%) reported regular consumption of alcohol, with 22% reporting weekly drinking, which is considerably lower than the 60% national average for Irish males. One in five farmers (22%) also reported weekly 'binge' drinking (≥6 standard alcoholic drinks per drinking session), which is similar to the national average of 21%. Significant binary regression (Table 1) findings showed that 'younger' farmers (<45 years) were more likely to report smoking and weekly alcohol consumption. Farmers >45 years were more likely to report having arthritis. Full-time farmers were more likely to report having lower back pain in the past 12 months.

Putting health first

Older farmers (>45 years) were significantly more likely to report having arthritis, with the proportion of those reporting rheumatoid arthritis (13%) being three times higher than the national average of Irish males. It is well known that arthritis has a detrimental effect on job productivity, and therefore might impact negatively on farm productivity and farm income. Although farmers over 45 years of age were significantly more likely to report having used doctor services in the past 12 months, and engagement in preventive health check, overall reported use of doctor services was lower compared to the national average of Irish males. 'Working identity' tends to be highly important for farmers and work might be put ahead of any other responsibilities in life, such as health. 'Younger' farmers (<45 years) were more likely to report harmful health behaviours such as smoking and 'binge' drinking. The negative health effects of smoking are well established. Binge drinking has been found to be an independent risk factor for ischaemic stroke.

Table 1: Socio-demographic and farming characteristics impacting farmers’ self-reported health – binary analysis.

Independent variable	Dependent variable	P value*	Odds ratio**	95% confidence interval for odds ratio***	
				Lower	Upper
	Health rating very good – excellent				
Age in years <45 ≥45 (indicator)		0.046	1.738	1.010	0.992
Farm enterprise Mixed (indicator) Dairy Cattle		0.013 0.863	2.129 1.062	1.177 0.534	3.851 2.115
	Utilisation of doctor services in past 12 months				
Age in years <45 (indicator) ≥45		0.001	2.553	1.482	4.398
	Engagement in health screening in past 12 months				
Age in years <45 (indicator) ≥45		0.001	3.078	1.746	5.426
	Lower back pain				
Full-time farming Part-time (indicator)		0.029	2.449	1.093	5.484
	Arthritis				
Age in years <45 (indicator) ≥45		0.001	6.312	2.139	18.627
	Smoking				
Age in years <45 ≥45 (indicator)		0.001	4.252	1.931	9.363
	Alcohol				
Age in years <45 ≥45 (indicator)		0.020	2.73	1.173	6.355

*P: findings are statistically significant from reference value.
 **OR (odds ratio): measurement of association between an exposure and an outcome.
 ***CI (confidence intervals for odds ratio): range of observed effect.

Insight into farmer health

This study acknowledges the limitations of convenience sampling and the ‘healthy worker’ effect. Self-report measures rely on participants providing honest and reliable responses and should, therefore, be treated with caution. Despite these limitations, this study offers useful insights into the association between farming characteristics and self-reported health outcomes. The findings identified self-reported patterns of precarious health behaviours among subgroups of Irish farmers for whom targeted health interventions are warranted.

Further reading

This article is based on the recently published paper: Van Doorn, D., Richardson, N., Storey, A., Osborne, A., Cunningham, C., Blake, C., *et al.* (2018). ‘Farming characteristics and self-reported health outcomes of Irish farmers’. *Occupational Medicine*, kqy020. Available from: <https://doi-org.ucd.idm.oclc.org/10.1093/occmed/kqy020>.

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